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- <110> Yu, Guo-Liang Ebner, Reinhard Ni, Jian Rosen, Craig A.
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ccae		.ca e	age	caa	ge as	guga	Met		_			Glu			i Gln	175
	_				_		_		aga Arg	-	-	_		_	-	221
	_	-						_	gaa Glu 35	_			_	_		269
		_		_	_	_	-	_	acc Thr	_	_	_	-	_	_	317
	_	_		_					tac Tyr	_		_	_	_		365
									ctg Leu							413
									aag Lys							461
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-				_	-		_	_	aat Asn	-	-					557

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Ser 65	Phe	Tyr	Gln	Val	Ala 70	Ala	Leu	Gln	Gly	Asp 75	Leu	Ala	Ser	Leu	Arg 80
Ala	Glu	Leu	Gln	Gl y 85	His	His	Ala	Glu	Lys 90	Leu	Pro	Ala	Gly	Ala 95	Gly
Ala	Pro	Lys	Ala 100	Gly	Leu	Glu	Glu	Ala 105	Pro	Ala	Val	Thr	Ala 110	Gly	Leu
Lys	Ile	Phe 115	Glu	Pro	Pro	Ala	Pro 120	Gly	Glu	Gly	Asn	Ser 125	Ser	Gln	Asn
Ser	Arg 130	Asn	Lys	Arg	Ala	Val 135	Gln	Gly	Pro	Glu	Glu 140	Thr	Val	Thr	Gln
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Gly	Ser	Tyr	Thr	Phe 165	Val	Pro	Trp	Leu	Leu 170	Ser	Phe	Lys	Arg	Gly 175	Ser
Ala	Leu	Glu	Glu 180	Lys	Glu	Asn	Lys	Ile 185	Leu	Val	Lys	Glu	Thr 190	Gly	Tyr
Phe	Phe	Ile 195	Tyr	Gly	Gln	Val	Leu 200	Tyr	Thr	Asp	Lys	Thr 205	Tyr	Ala	Met
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Cys Leu Leu His Phe Gly Val Ile Gly Pro Gln Arg Glu Glu Phe Pro 50 60

Arg Asp Leu Ser Leu Ile Ser Pro Leu Ala Gln Ala Val Arg Ser Ser 65 70 75 80

Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro 85 90 95

Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu 100 105 110

Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser 115 120 125

Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly 130 135 140

Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala 145 150 155 160

Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro 165 170 175

Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu 180 185 190

Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu 195 200 205

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Arg Gln His Pro Lys Met His Leu Ala His Ser Thr Leu Lys Pro Ala 50 60

Ala His Leu Ile Gly Asp Pro Ser Lys Gln Asn Ser Leu Leu Trp Arg 65 70 75 80

Ala Asn Thr Asp Arg Ala Phe Leu Gln Asp Gly Phe Ser Leu Ser Asn 85 90 95

Asn Ser Leu Leu Val Pro Thr Ser Gly Ile Tyr Phe Val Tyr Ser Gln 100 105 110

Val Val Phe Ser Gly Lys Ala Tyr Ser Pro Lys Ala Thr Ser Ser Pro 115 120 125

Leu Tyr Leu Ala His Glu Val Gln Leu Phe Ser Ser Gln Tyr Pro Phe 130 135 140

His Val Pro Leu Leu Ser Ser Gln Lys Met Val Tyr Pro Gly Leu Gln 145 150 155 160

Glu Pro Trp Leu His Ser Met Tyr His Gly Ala Ala Phe Gln Leu Thr 165 170 175

Gln Gly Asp Gln Leu Ser Thr His Thr Asp Gly Ile Pro His Leu Val 180 185 190

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Thr Asp Leu Ser Pro Gly Leu Pro Ala Ala His Leu Ile Gly Ala Pro 85 90 95

Leu Lys Gly Gln Gly Leu Gly Trp Glu Thr Thr Lys Glu Gln Ala Phe

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Leu Leu Leu Glu Gly Ala Glu Thr Val Thr Pro Val Leu Asp Pro Ala

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Val Met Val Gly

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Pro Thr Ser Val Pro Arg Arg Pro Gly Gln Arg Arg Pro Pro Pro

Pro Pro Pro Pro Leu Pro Pro Pro Pro Pro Pro Pro Leu Pro 55

Pro Leu Pro Leu Pro Pro Leu Lys Lys Arg Gly Asn His Ser Thr Gly

Leu Cys Leu Leu Val Met Phe Phe Met Val Leu Val Ala Leu Val Gly 85

Leu Gly Leu Gly Met Phe Gln Leu Phe His Leu Gln Lys Glu Leu Ala 105

Glu Leu Arg Glu Ser Thr Ser Gln Met His Thr Ala Ser Ser Leu Glu 115

Lys Gln Ile Gly His Pro Ser Pro Pro Pro Glu Lys Lys Glu Leu Arg 135 Lys Val Ala His Leu Thr Gly Lys Ser Asn Ser Arg Ser Met Pro Leu 150 Glu Trp Glu Asp Thr Tyr Gly Ile Val Leu Leu Ser Gly Val Lys Tyr Lys Lys Gly Gly Leu Val Ile Asn Glu Thr Gly Leu Tyr Phe Val Tyr Ser Lys Val Tyr Phe Arg Gly Gln Ser Cys Asn Asn Leu Pro Leu Ser 200 His Lys Val Tyr Met Arg Asn Ser Lys Tyr Pro Gln Asp Leu Val Met 220 Met Glu Gly Lys Met Met Ser Tyr Cys Thr Thr Gly Gln Met Trp Ala 235 230 Arg Ser Ser Tyr Leu Gly Ala Val Phe Asn Leu Thr Ser Ala Asp His 250 245 Leu Tyr Val Asn Val Ser Glu Leu Ser Leu Val Asn Phe Glu Glu Ser Gln Thr Phe Phe Gly Leu Tyr Lys Leu <210> 7 <211> 337 <212> DNA <213> Homo sapiens <220> <223> Description of Combined DNA/RNA Molecule: n equals a, t, g, or c <220> <221> misc_feature <222> (3) <223> n equals a, t, g, or c <220> <221> misc_feature <222> (58) <223> n equals a, t, g, or c <220> <221> misc_feature <222> (67)..(71) <223> n equals a, t, g, or c <220> <221> misc_feature <222> (212) <223> n equals a, t, g, or c

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ttgccttaag aaaagagaag aaatgaaact gnaaggagtg tgtttccatc ctcccacgga 240
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gatttcttcg tctggaaaca ttttgccaaa ctcttcagat actctttnct ctctgggaat 300
caaaggaaaa tototactta gattnacaca tttgttocca tgggtntott aagttttaaa 360
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cgg aag gaa agc Arg Lys Glu Ser 35	ccc tct gtc Pro Ser Val	cga tcc tcc a Arg Ser Ser L 40	aa gac gga aag ctg ys Asp Gly Lys Leu 45	ctg 144 Leu
gct gca acc ttg Ala Ala Thr Leu 50	ctg ctg gca Leu Leu Ala 55	ctg ctg tct t Leu Leu Ser C	gc tgc ctc acg gtg ys Cys Leu Thr Val 60	g gtg 192 L Val
tot tto tac cag Ser Phe Tyr Glr 65	gtg gcc gcc Val Ala Ala 70	ctg caa ggg G Leu Gln Gly A	gac ctg gcc agc cto Asp Leu Ala Ser Leo 75	c cgg 240 u Arg 80
gca gag ctg cag Ala Glu Leu Glr	g ggc cac cac n Gly His His 85	gcg gag aag o Ala Glu Lys I 90	ctg cca gca gga gc. Leu Pro Ala Gly Al. 9	a Gry
gcc ccc aag gcc Ala Pro Lys Ala 100	a Gly Leu Glu	gaa gct cca (Glu Ala Pro) 105	gct gtc acc gcg gg Ala Val Thr Ala Gl 110	a ctg 336 y Leu
aaa atc ttt ga Lys Ile Phe Gl 115	a cca cca gct u Pro Pro Ala	cca gga gaa Pro Gly Glu 120	ggc aac tcc agt ca Gly Asn Ser Ser Gl 125	g aac 384 n Asn
agc aga aat aa Ser Arg Asn Ly 130	g cgt gcc gtt s Arg Ala Val 135	Gln Gly Pro	gaa gaa aca gga to Glu Glu Thr Gly Se 140	et tac 432 er Tyr
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gaa aaa gag aa Glu Lys Glu As	t aaa ata ttg n Lys Ile Leu 165	g gtc aaa gaa n Val Lys Glu 170	act ggt tac ttt tt Thr Gly Tyr Phe Pl	tt ata 528 ne Ile 75
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act ttg ttt co Thr Leu Phe A: 210	ga tgt att car rg Cys Ile Gl: 21	n Asn Met Pro	gaa aca cta ccc a Glu Thr Leu Pro A 220	at aat 672 sn Asn
tcc tgc tat to Ser Cys Tyr S 225	ca gct ggc at er Ala Gly Il 230	t gca aaa ctg e Ala Lys Leu	gaa gaa gga gat g Glu Glu Gly Asp G 235	gaa ctc 720 Slu Leu 240
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818

903

Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp 250 245 gtc aca ttt ttt ggt gca ttg aaa ctg ctg tgacctactt acaccatgtc Val Thr Phe Phe Gly Ala Leu Lys Leu Leu tgtagctatt ttcctccctt tctctgtacc tctaagaaga aagaatctaa ctgaaaatac 878 caaaaaaaa aaaaaaaaaa aaaaa <210> 19 <211> 266 <212> PRT <213> Homo sapiens <400> 19 Met Asp Asp Ser Thr Glu Arg Glu Gln Ser Arg Leu Thr Ser Cys Leu 10 Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu 105 Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn 120 Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser Ala Leu Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr Phe Phe Ile 170 Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met Gly His Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu Val 200 Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu Pro Asn Asn 215 220 210

Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly Asp Glu Leu 225 230 235 240

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Tyr Leu Leu Tyr Ser Gln Val Leu Phe Gln Asp Val Thr Phe Thr Met 50 55 60

Gly Gln Val Val Ser Arg Glu Gly Gln Gly Arg Gln Glu Thr Leu Phe 65 70 75 80

Arg Cys Ile Arg Ser Met Pro Ser His Pro Asp Arg Ala Tyr Asn Ser 85 90 95

Cys Tyr Ser Ala Gly Val Phe His Leu His Gln Gly Asp Ile Leu Ser 100 105 110

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tac aca ttt gtt cca tgg ctt ctc agc ttt aaa aga gga aat gcc ttg Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Asn Ala Leu 35 40 45	144									
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aat tee tge tae teg get gge ate geg agg etg gaa gaa gga gat gag Asn Ser Cys Tyr Ser Ala Gly Ile Ala Arg Leu Glu Glu Gly Asp Glu 115 120 125	384									
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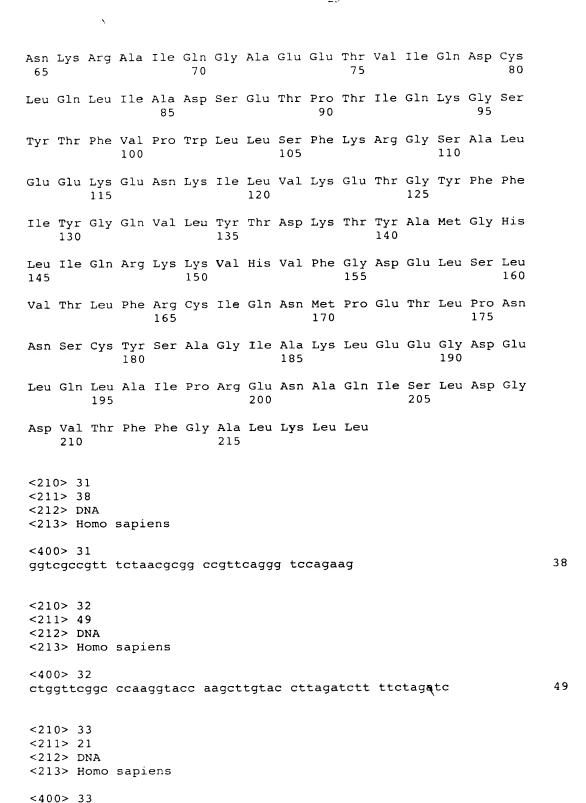
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Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Ser Ser Arg 50 55 60	Ī
Asn Lys Arg Ala Ile Gln Gly Ala Glu Glu Thr Val Ile Gln Asp Cys 65 70 75 80	;)
Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys Gly Se: 85 90 95	5
Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser Ala Le 100 105 110	ı

Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr Phe Phe 120 Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met Gly His 135 Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu 150 Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu Pro Asn 170 Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly Asp Glu 190 185 Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu Asp Gly 205 200 195 Asp Val Thr Phe Phe Gly Ala Leu Lys Leu Leu 215 210 <210> 29 <211> 657 <212> DNA <213> Homo sapiens <400> 29 taccaggtgg cggccgtgca aggggacctg gccagcctcc gggcagagct gcagagccac 60 cacgeggaga agetgecage aagageaaga gececcaagg eeggtetggg ggaageteea 120 getgtcaccg egggactgaa aatetttgaa ecaccagete eaggagaagg eaactceagt 180 cagagcagca gaaataagcg tgctattcag ggtgcagaag aaacagtcat tcaagactgc 240 ttgcaactga ttgcagacag tgaaacacca actatacaaa aaggatctta cacatttgtt 300 ccatggette teagetttaa aaggggaagt geectagaag aaaaagagaa taaaatattg 360 gtcaaagaaa ctggttactt ttttatatat ggtcaggttt tatacactga taagacctat 420 gccatgggac atctaattca gaggaaaaaa gtccatgtct ttggggatga attgagtctg 480 gtgactttgt ttcgatgtat tcaaaatatg cctgaaacac tacccaataa ttcctgctat 540 tcagctggca ttgcaaaact ggaagaaggg gatgaacttc aacttgcaat accacgagaa 600 aatgcacaaa tatcactgga tggagatgtc acattttttg gtgccctcaa actgctg <210> 30 <211> 219 <212> PRT <213> Homo sapiens <400> 30 Tyr Gln Val Ala Ala Val Gln Gly Asp Leu Ala Ser Leu Arg Ala Glu Leu Gln Ser His His Ala Glu Lys Leu Pro Ala Arg Ala Arg Ala Pro Lys Ala Gly Leu Gly Glu Ala Pro Ala Val Thr Ala Gly Leu Lys Ile

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